

CLAIMS

1. A detergent-impregnated article comprising a base body and a detergent impregnated in said body, said detergent comprising solid abrasive particles and a protective layer-forming component, and said solid abrasive particles consisting of organic polymer particles and/or inorganic particles.

2. The detergent-impregnated article according to claim 1, wherein said solid abrasive particles have an average primary particle size of 0.1 to 100 μm .

10 3. The detergent-impregnated article according to claim 1, wherein said solid abrasive particles have a true specific gravity of 0.5 to 2.5.

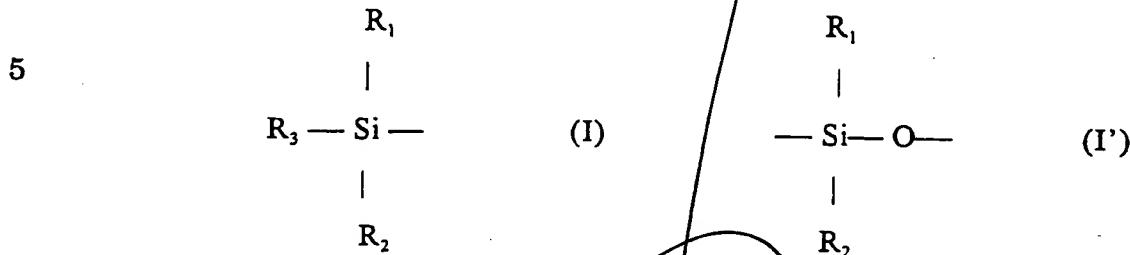
4. The detergent-impregnated article according to claim 1, wherein a major component of said solid abrasive particles has a surface energy of not more than 80 mN/m when measured independently in the form of a plane.

15 5. The detergent-impregnated article according to claim 1, wherein said solid abrasive particles are spherical particles having an average particle size of 0.01 to 15 μm .

20 6. The detergent-impregnated article according to claim 5, wherein 90% or more, in number, of said spherical particles have a projected image of a true circle, or said spherical particles have a projected image whose outline is confined between a circle circumscribing the projected image and a concentric circle whose radius is 90% of that of the circumscribing circle.

25 7. The detergent-impregnated article according to claim 1, wherein said

protective layer-forming component comprises organopolysiloxane containing at least one constituent unit selected from the group consisting of formula (I) and represented by formula (I'):



10 wherein R₁, R₂, and R₃, which may be the same or different, each represent an alkyl, alkoxy or hydroxyalkyl group having 1 to 100 carbon atoms, a hydroxyl group, a carboxyl group, a carboxyalkyl group, an N-(2-aminoalkyl)aminoalkyl group, an aminoalkyl group, an amino group, an epoxyalkyl group, an epoxy group, a methylpolyoxyethylenealkyl group, a hydroxypolyoxyethylenealkyl group, a methylpolyoxyethylene polyoxypropylene group, a hydroxypolyoxyethylene polyoxypropylene group, an alkylpolyoxypropylene group, a polyoxyethylene group, a phenyl group or a fluorinated alkyl group.

20 8. The detergent impregnated article according to claim 1, wherein said detergent comprises 0.1 to 20% by weight of said solid abrasive particles, and 0.01 to 20% by weight of said protective layer-forming component.

9. The detergent-impregnated article according to claim 1, wherein said
25 detergent further contains an organic solvent comprising at least one of the
following components:

a straight-chain, branched or cyclic hydrocarbon which is liquid at ambient temperature,

an ester oil which has 10 to 60 carbon atoms and is liquid at ambient temperature,

a glycol ether represented by formula (II):

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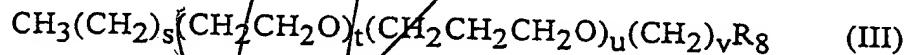


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wherein R_4 and R_5 each represent a straight-chain or branched alkyl group having 1 to 8 carbon atoms, a hydroxyl group or a hydrogen atom; q and r each represent a number of 0 to 20; and R_6 and R_7 each represent a hydrogen atom or a methyl group, provided that R_6 and R_7 are different.

a polyhydric alcohol having 4 to 12 carbon atoms,
a compound represented by formula (III):

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wherein R_8 represents a hydrogen atom, a methyl group or a hydroxyl group, and s , t , u , and v each represent an integer of 0 to 100

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a cyclic silicone.

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10. The detergent-impregnated article according to claim 9, wherein said detergent contains 0.05 to 60% by weight of said organic solvent.

11. The detergent-impregnated article according to claim 1, wherein said detergent further contains 0.2 to 30% by weight of a drying accelerator.

12. The detergent-impregnated article according to claim 1, wherein said

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detergent further contains 0.01 to 10% by weight of a thickening polysaccharide.

13. The detergent-impregnated article according to claim 1, wherein said detergent further contains 0.005 to 20% by weight of a surface active agent.

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14. The detergent-impregnated article according to claim 1, wherein said detergent has a viscosity of 2 to 500 mPa · s at 20°C under uniformly stirring.

10 15. The detergent-impregnated article according to claim 1, wherein said base body is capable of absorbing 50 to 5000% by weight of the detergent based on its own weight with no load applied thereon.

15 16. The detergent-impregnated article according to claim 1, wherein said base body comprises paper, nonwoven fabric, woven fabric, knitted fabric or a flexible porous structure.

17. The detergent-impregnated article according to claim 1, wherein said detergent is a glass cleaning detergent.

20 18. A detergent-impregnated article for cleaning a hard surface comprising a base body and a detergent impregnated in said body, which provides a static friction coefficient of 0 to 1.0 to the surface of a flat and transparent soda-lime glass plate after said detergent-impregnated article is applied to said surface to supply said detergent thereto and then dirt and said detergent are wiped off said surface with a wiping sheet.

25 19. A method for cleaning a hard surface comprising the steps of:
wiping a hard surface to be cleaned with a detergent-

impregnated article comprising a base body and a detergent impregnated in said base body to apply said detergent to said hard surface and to release dirt from said hard surface, said detergent comprising solid abrasive particles and a protective layer-forming component, and then

5 wiping said hard surface with a wiping sheet to remove said dirt and said detergent and to form a stain-resistant protective layer on said surface.

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